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# Creativity and the Commodity in the Automobile Industry

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## ABSTRACT

This paper presents a qualitative understanding of what embedded creative employment does and the role it plays in the wider capitalist economy. A series of case studies of creative practices in the automotive manufacturing sector are used to illuminate the major ideas of the paper. Although manufacturing is typically considered to be about as far as one can get from the usual nature of creative industries, it is suggested that creative work may play a greater part than is commonly thought. The increase in specialist creative professionals employed within sectors outside the creative industries such as car manufacturing is used as evidence to reinforce the more general point that the economy is much more creative and cultural than it is given credit for, and, by extension, creative industries and creative employees play a much more integral role than some accounts would suggest.

**Keywords:** Creative industries, Creative employment, Manufacturing, Capitalism, Commodities, Car industry

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## 1. INTRODUCTION

Embedded creative employment is employment of creatives in areas of industry and the economy typically considered to be 'non-creative' in that they fall outside the creative industries and do not exhibit any of the familiar traits of creative companies or organizations (Cunningham & Higgs, 2009). In recent years much work has been done in the UK to delineate the quantitative dimensions of embedded employment and the trouble it brings for standard classifications and definitions of boundaries between creative industries, creative employees and the 'rest' of the economy (Bakhshi, Freeman, & Higgs, 2013). The contribution of this paper will be to flesh out our *qualitative* understanding of what embedded creative employment does and the role it plays with reference to the wider capitalist economy. According to Australian data provided by Cunningham and Higgs (2009), a third of all creative workers are in employment outside the formal creative industries. Whilst the composition and obsolescence of many government statistics make it hard to ascertain, the increasing importance of creative activities and practices in 'non-creative' industries may provide valuable qualitative support to the currently tentative assertions of the growing body of quantitative research on the topic.

To that end, this paper provides an overarching case study of embedded creativity in the automotive manufacturing sector. This case study is composed of a series of smaller case studies and examples that show the particular dimensions of creative practices in this area. These smaller case studies will assess the role of creativity in the constitution of the 'experience economy'. This concept, coined by Pine and Gilmore (1999), describes the degree to which "intangible value-adding [...] accompanies the consumption of creative products and services" (Hartley et al., 2013, p. 60). Whereas Hartley et al. imply the experi-

ence economy as the realm of 'cultural identity and social empowerment' simulated through consumption that complements the high-tech, high-growth, knowledge-intensive work that takes place in the 'production' part of the creative industries (Hartley et al., p. 59), this paper examines the constitution of the former within the sphere of the latter, even where this requires collapsing the distinction between the two. In looking at the 'experience economy', the paper will consider the way in which consumer experience is carefully formulated in the design and marketing of automobiles and the diverse set of creative practices that this demands of car companies and other enterprises. The pre-eminence of the functions performed by specialist creative professionals employed within sectors outside the creative industries such as manufacturing is used as evidence to reinforce the more general point that the economy is much more creative and cultural than it is commonly given credit for, and, by extension, creative industries and creative employees play a far more integral role than some accounts and statistical representations recognize.

Creative industries represent aggregations of creative employment (Freeman, 2012). Creative employment, however, also appears and aggregates at other points: art, design, content and advertising departments within companies outside the creative industries all represent lesser examples of this institutionalization and rationalization of creative processes. Where there is creative employment, there is creativity, and vice versa. Although manufacturing is typically considered to be about as far as one can get from the usual nature of the creative industries, there is evidence that creative work may play a greater role than might typically be thought.

We will first look at the generation of an experience economy in the automotive industry, which places an emphasis on the creation and communication of experiences for customers (Pine &

Gilmore, 1999). This experience economy is developed primarily by means of a greater creative involvement of the consumer in the production of the particular good or service that they are interested in purchasing, which relies on a much closer feedback loop between production and consumption, and the bolstered involvement of user-experience personnel in the development of products (in this case, automobiles). Both aspects are heavily oriented towards the use of cutting-edge technology, much of which straddles the line between engineering and creative arts, such as content provision and games programming.

## 2. THE FEEDBACK LOOP BETWEEN CONSUMPTION AND PRODUCTION

The rise in goods and services which have attached to them a greater informational or experiential quality is demonstrated in the statistic that in the UK between 1975 and 2009 there was a 13 per cent decrease in spending on necessities such as food and clothing, an 11 per cent increase in spending on services and around a 100 per cent increase in real expenditure on both leisure and entertainment. Indeed, in 1997/1998, household spending on leisure exceeded that spent on food for the first time (The Work Foundation, 2009).

Knowledge-intensive and creative producers, suggests a report published by the UK think-tank The Work Foundation, are defined by the specific ways in which they anticipate, respond to, and shape the demand of these consumers. The necessity to constantly adapt to and respond to changing customer demands requires businesses to accumulate an arsenal of intangible assets which "strengthen[] firms' capacity to create, manage and exploit knowledge, and above all to interact and respond to the new evolution of demand" (The Work Foundation, 2009, p. 17). However, such work is not simply a case of meeting pre-existing consumer demands, but actively

crafting demand on the basis that a group of consumers accustomed to the purchase of high-specification, high-quality products already exists. As all this suggests, the uptake of creative products is beset by considerable uncertainty (The Work Foundation, 2009, p. 69), relying as it does on a complex interweaving of consistently changing and constantly reinvented desires, demands, and supply responses.

Although the pre-eminence and discernment of the consumer is not a new phenomenon, the proximity of the consumer to the production process engendered through this interface of demand and response is a more recent phenomenon. The 'feedback loop' between consumer desires and the coalface of production has become ever-more rapid, enabling consumers to provide producers with a greater degree of information and allowing the producer to respond in turn with products tailor-made to the spontaneously changing wants of the market. An example of where this may manifest is given by the Work Foundation, who cite figures indicating an increase from 5,000 customized consumer goods in the 1970s to over 25,000 in the late 1990s, spanning from fast food menu options to university course syllabuses (The Work Foundation, 2009, p. 73).

Customization and the intimate feedback loop between consumer and producer have been grouped together under the moniker 'Toyotism' in some accounts (Hardt & Negri, 2001, pp. 289-290), so named because of the way in which the Japanese car manufacturer innovated to produce automobiles to order rather than build up a stock inventory as is traditional. This feedback loop becomes so close and quick in certain cases, that, facilitated by internet technology, there arises what the Work Foundation (The Work Foundation, 2009, p. 17) calls an "'iterative' relationship between consumer and producer". This 'co-production' has changed business models, especially in the creative industries.

<sup>2</sup> At its starkest extreme, we can see a distorted image of this substitution in the periodic scandals over horsemeat masquerading as beef, or quack remedies sold as miracle cures. The material substrate does not matter. All that does matter is that the nominal commodity is consumed, with all the feelings of having consumed it. This is an aspect of experience: the hearty feeling of having eaten a steak, or the sense of wellness gained from imbibing a medicine. The provenance of the meat, or the scientificity of the medicine, is less significant than the experience of consumption generated by the efforts of advertisers, designers and others to imbue the product with the right

### 3. CASE STUDY 1: CO-PRODUCTION IN THE AUTOMOTIVE INDUSTRY

A *Financial Times* article (2011) gives some examples of the role that co-production plays in the automotive industry. Many suggest an increased role of creativity in the production process. This is not only the creativity of creative employees, but the facilitation of a creative relationship incorporating the consumer as well. For instance, BMW has produced innovative films of its custom made-to-order X3 model being 'born', a direct 'creativization' of an otherwise material process. The customer experience is here at the forefront of the business model. This is something we will explore further, but some good examples of where the process of 'co-production' involves the creation of a novel *experience* for the consumer are the factory tours and company meet and greets offered to buyers of custom-made Rolls-Royce and Aston Martin cars. In Dresden, Germany, Volkswagen actually puts together cars in the presence of those who have ordered them, with their 'glass factory' constituting not only a showroom but a manufacturing unit in which the customer plays as much a part as the engineer. Rolls-Royce has also introduced a similar model of intense, hands-on customer involvement into their production process. The example of coproduction suggests the way in which the manufacturing and marketing functions of fairly traditional commodity-producing firms today exhibit a much greater sensitivity to the customer experience of the goods and services they offer. Although this is nothing new – a positive experience has always been necessary in order for a buyer to endow a product with value – today we see the experience beginning to substitute for the actual material good in some cases<sup>2</sup>. When buyers consume a commodity, it could be said that it is the *experience* of consumption that is consumed rather than the commodity itself.

The example of co-production, and of Toyotism more generally, illustrates the way in which

businesses have moved away from investment in traditional resources and 'economies of scale' to intangible assets and networked relations with other segments of industry that offer the ability to rapidly respond to consumer information (The Work Foundation, 2009). The flexibility afforded by intangible assets cannot be understated. In the last 20 years, it is suggested, intangible assets have come to represent 70 per cent of an average company's total value. In the 1980s, this figure was only 40 per cent. Much of these intangible assets will involve the creative industries in some way (The Work Foundation, 2009).

### 4. AN EXPERIENCE ECONOMY

A number of accounts of changing audience composition and consumer demand suggest that somehow the way that people consume commodities today is radically different than in the past, and that discernment, 'experience' and meaning-making in the purchase and use of goods and services is something that can only be attributed to twenty-first century, hyper-connected, tech- and culture-savvy buyers. However, the exchange and procurement of products of labor and industry, the ascription of the status of 'commodities' upon them, and their valuation as something useful or desirable has always been a creative, knowledge-intensive process driven by symbolic attachment rather than the deterministic, mechanistic, and predictable input and output of material factors. This suggests that any claims for the novelty of the creative industries based upon the types of goods it produces are wanting. The following paragraph from the Work Foundation report repeats this fallacy of contemporary difference yet contains a kernel of truth:

*Increasingly, consumers identify being part of a 'staged' experience as contributing to their satisfaction in spending; an airline flight, visit to a department store [...] or even sleeping in a bed are no longer simple acts of consumption –*

meanings and associations. As we see in the example of creative professionals in the car industry, this delineation of desire begins early on in the process of production, and can even be said to occur beforehand, in that a clear idea of what will result must be formulated in advance of a given process of production commencing. This is not necessarily conspiracy, deception, or trickery, but a generalized feature of commodity consumption. No commodity in and of itself truly lives up to all the meanings and associations invested in it. But work can be done to help configure these feelings.

*these are experiences. The quality and energy of the creative industries provide templates for creatively developing such experiences and a flow of skilled people to migrate into the wider economy who know how to mount them. There is some evidence that innovation and creativity in the wider economy is stimulated by the creative industries in this way (2009, p. 22).*

The creative development of experiences is indeed a feature of the contemporary creative industries. However, the 'experience' of consumption has always been present, albeit perhaps in an intensified form today. One notable change is the "shift from producer-led, standardized markets of commodities, goods and services to markets in which more personalized services and experiences" are produced and consumed (The Work Foundation, 2009, p. 70). Further, the proliferation of experiences, whilst a long-standing part of commodity production and exchange, is demonstrated by the average annual increase of 8.9 per cent in the number goods and services that can be defined as 'experiences' bought and consumed year-on-year from 1959 to 1996, largely incorporating the growing spheres of economic activity devoted to entertainment, culture and events (Pine & Gilmore, 1999). But an experiential quality, as suggested here, can be applied more broadly to include a range of commonplace commodities.

It may be suggested, as the excerpt from the Work Foundation report quoted above implies, that the provision of this experience in other parts of the economy beyond the creative industries is a golden thread that links the creative and so-called 'non-creative' industries. Yet more can be said than the quote might suggest: this 'golden thread' of experience-provision reveals creative and 'non-creative' industries to be integrated in a way that calls into question their clean and easy separation. If all commodities, rather than only 'creative' ones, have this experiential quality, then how does this change the

way we think about the relationship between the creative industries (commonly defined) and the rest of the economy?

## 5. FROM THE COMMUNICATION TO THE CREATION OF EXPERIENCES

However, this experiential quality has not only been present for most of the history of the capitalist economic system in some form or another, but is common to *all* industries, not merely the 'creative' ones. For the cultural theorist Raymond Williams (1965), art, culture and creativity were 'ordinary' elements of life. The conception of creative works as either attempted approximations, fantastical representations, or accurate reproductions of reality is based upon a separation of art, culture, and creativity from 'reality' and the ordinariness of life. For Williams, the creative work is an attempt to capture and communicate an experience that is both subjective and objective, conditioned by things and processes beyond our control (see Hesmondhalgh & Baker, 2011). All humans, in their everyday activity, attempt to comprehend these experiences and communicate them to others. Therefore, whilst creative workers undoubtedly possess many unique and extraordinary traits and abilities, what they do is also very *ordinary*. Differentiating them are the learned skills and specific capabilities they bring to the formulation of experiences, and, in many cases, their vocational commitment to this endeavor. By extension, what the creative industries specifically represent is an *institutionalization* of this everyday activity, an attempt on a greater and more organized level to capture and communicate experiences. Furthermore, there are varying degrees of success for such workers, as some manage to communicate experiences better than others, for instance. Therefore, Williams is resolutely not a relativist: some art and culture achieves a greater degree of truth and verisimilitude than other art and culture (Hesmondhalgh & Baker, 2011).



However, what we have before us today may differ significantly from this conceptualization. Rather than representing a pre-existing reality to greater or lesser degrees of success, today success can be apportioned to the ability to *create* new experiences. What we can identify in the examples at hand is a development that surpasses the simple capturing and communicating of experience. The 'experience economy' may still work with the everyday and ordinary materials of reality, but differs in an important way from the picture of creative work built up by Williams. For, more so than the pure delineation of the bounds of experience, what the creative industries and creative employees outside these industries can today be seen to be doing is actively *creating* and commodifying entirely new experiences from scratch. In order to do this, one need not be limited by the constraints of 'reality' at all.

## 6. CASE STUDY 2: JAGUAR LAND ROVER'S USER-EXPERIENCE

As *The Independent* (McCormack, 2006) notes, there has been "a decline in the practice of car manufacturers asking outside design houses to come up with designs". The move back to in-house design teams has coincided with the integration of design as a "central part of the overall package when a car is launched". The example given by the article quoted is that of the Renault Megane 'shakin' that ass' campaign, which emphasized the 'simple design feature of a protruding boot' as the car's chief selling point. Further along the car manufacturing chain, there is a prominent role for design in the interiors and components produced by suppliers and sold to manufacturers.

User-experience is central to the importance of design in the automotive industry. At Jaguar Land Rover, this is achieved partly through the kind of 'co-production' that we discussed earlier. As *The Economist* reports, at the sprawling Jaguar premises in Solihull, "potential customers can test-

drive a selection of the carmaker's four-wheel-drives around a wooded 'jungle track' ", as well as enjoy the more standard tour of the assembly line offered to customers by other firms (*The Economist*, 2012b).

This crafting of the user experience is best exemplified by what Jaguar call their 'Virtual Experience'. This innovative and creative virtual product simulates the experience of the Land Rover for potential customers. Customers can 'engage and interact with an almost life-size high resolution rendering' of the vehicle, with full exterior and interior views, and the ability to 'open doors and start the ignition'. The system is portable, allowing it to be used in showrooms, public spaces, and trade fairs. In the future, Jaguar intend to embed within the virtual experience the capacity of customers to 'design and save their vehicle on a mobile device at home' which can then be uploaded onto the virtual experience so that they can visualize how their design would play out in practice (Jaguar Land Rover Newsroom, 2012).

## 7. CARS, COMMODITIES AND COMMONSENSE

The car presents a good example for our discussion. There is something about the automobile that is synonymous with the purest notion of the capitalist commodity. It is functional, yet glamorous, expensive, yet widespread, and inextricably linked in the popular imagination with the idealized portrait of the American car worker of the twenties and thirties setting part of his paycheck aside to put down a payment on the Ford model-T he had helped to put together that week. Indeed, many of the trends that academics ascribe to capitalist production have their origin in the car industry: from Taylorism and Fordism through to latter-day Toyotism, the way in which cars are designed, created and delivered seems somehow analogous to the economy as a whole. The automotive industry, in this way, invites a more malleable meaning to be made of it than one might

think. It produces not only the cold, hard shiny body and inner parts of a machine for traveling from A to B, but something else: an experience, an object of desire. This desire is further stimulated by the high-tech concept cars the industry regularly exhibits.

In the contemporary scene, the automotive industry provides a useful way to reconceptualize how we think about the relationship between creative industries and the economy as a whole, represented by the range of traditional, material commodities we are presented with in the marketplace. Consider the car. Typically, one might picture the process of its design, production, sale, and consumption as functioning something along the lines of the following. A design for a car is formulated, responding to the success of previous models, the current standard of technological know-how, and likely a level of market research about how best to target the aims and aspirations of certain audiences grouped into their relative abilities to pay such-and-such an amount for such-and-such an affordance of comfort and horsepower. Once a design is drawn up and prototyped, the manufacturing of the car begins. This is generally considered to be the most important part, for without it, what would the company have to sell? The nuts and bolts are secured tightly in place and many, many cars roll off the production line to form part of a large stock inventory which sits primed to go to market. In showrooms across the length and breadth of the world, car salesmen ambush interested potential buyers, letting them test drive the car. The car is both pleasurable to drive and efficient for the daily commute, causing the consumer to arrange payment and drive it home that day. It gives many years of good service.

This picture is predisposed upon a certain understanding of what we buy when we buy a commodity. The common-sense conception is that we purchase a material, functional good, the value

of which consists in the work that has gone into produce it. We imagine the engineers in the workshop, carefully injecting value into the car as it slowly comes together through the craft and skill of those employed on its production. The desire, status and mystique that accompany the commodity are seen as something incidental to this material substrate. So too do we see the kind of roles that are involved in the stimulation of these purely 'incidental' manifestations of desirability and esteem as something of an afterthought to the production of the useful object: the design of the superficial aspects of the car's appearance, the people in advertising who come up with the marketing campaign and tagline of the car, the content providers who produce promotional videos and the impressive 360-degree views of the car available on the internet, and finally the salespeople, regurgitating the language of the company press releases and promotional materials produced by the company.

But what makes a commodity? What makes a market? Both would be impossible without the buying and selling of things. If no one wants to buy, and no one wants to sell, the products of hard human labor such as the automobile sitting in the stock inventory waiting to be sold will remain there, unsold, without a buyer. They will be only *potential* commodities, mere *products* without a market. Thus, perhaps we can attribute greater importance to those 'incidental' aspects of the commodity and its production. The stuff that makes it desirable, that gets it bought and sold, may be more integral to the actual commodity itself than the common-sense picture would allow. When we consume a commodity, we consume not only something hard and material, but something slight and ephemeral: experiences and emotions, meanings co-constructed between the professionals who help create the commodity and those who consume it. The example of the car industry helps us think through this novel picture.



We have seen how the old idea of a stock inventory awaiting sale is not a realistic one in today's climate. 'Toyotism', if we may call it that, is still the tendency. Made to order cars are not merely for the privileged 'co-producing' consumers mentioned earlier, who order custom-made models from the best carmakers, but are a feature of all automobile production, where processes have been made flexible enough to respond and react to the changing whims of the consumer market.

We have already seen in the previous case study the extent to which the design of user experience today plays a determining role in the final configuration of the car, rather than the purely functional concerns of horse-power, fuel efficiency and the like. However, perhaps the most interesting example which conflicts with the common-sense conception of what we buy when we buy a car is the employment of 3D visualization and augmented reality in the production of cars, especially in Jaguar Land Rover's 'virtual cave'. In this case study, the idea that the selling, advertising, and marketing of a product, along with the creative practices that revolve around these areas, is something that comes after the product is shown to be slightly old-fashioned. Cutting edge 3D visualization allows the integration of these aspects at the very earliest stages of the car's creation.

### 8. CASE STUDY 3: JAGUAR LAND ROVER'S VIRTUAL CAVE

As we have seen, Jaguar Land Rover exhibit the way in which design principles run through every stage of the production, consumption and co-production of their automobiles. As we have explored, this design is not simply centered upon the functionality of the car, but integrates its desirability and pleasurable. Indeed, it is on this basis that the car is finally sold. Rather than limiting the fulfilment of the sale and the stirring of consumer wants to the end of the process, the

digitization of manufacturing has enabled car manufacturers to integrate this into the very design of the car itself. 3D visualization enables engineers to work on a car and even test aspects of it in simulation, without a material car having even been prototyped, allowing advertising, design, content, social media, and marketing staff to become involved in the production process of a car rather than working only with the end product after it comes off the assembly line. As *The Economist* (2012a) reports,

*A new vehicle today is likely to be drawn up as a three-dimensional "digital prototype" long before it is actually built. It can be walked around, sat in, test-driven in a simulator, taken apart and placed in a virtual factory to work out how to build it. And the same software can be used by others in the company, including advertising staff who want to market the vehicle. The images generated from digital prototypes are now so good they are often used to produce brochures and television ads before a new car is built [...].*

The Jaguar Land Rover 'Virtual Cave' is perhaps the most notable example of this new technology. It is a walk-in room with empty walls where 3D projections of the virtual car can be viewed through 3D glasses. A 'wand' is used to interact with and control the 3D interface. It was installed in 2008, and by 2010 had saved the company some £8 million (US\$ 12.3 million) in the cost of physical parts. This demonstrates the way in which material production can itself be dispensed with through the use of creative and innovative solutions such as 3D visualization, which draw upon the skills of creative workers such as games makers and content providers.

Rather than having the components at hand, engineers can visualize and 'use' the components through high-resolution 3D graphics which allow navigation of the full inner and outer contents of

the car. The cost of components, prototypes, and models is thus reduced. Moreover, inventory and fixed capital is reduced, along with the time it takes to manufacture and market an automobile. This time premium can help companies taking advantage of this technology to respond rapidly to changing markets and competitive demands, as well as evaluate the compatibility of a potential model with the company's current assembly line capacity and mandated safety and efficiency standards.

As noted, the marketing can take place during the earliest stages of the car's manufacture, whilst it is still in the virtual cave. This will be based upon the design knowledge generated in close combination with the car's development. Indeed, the virtual cave bears significant dividends for those responsible for creating and designing the user-experience elements of the car. Designers can sit in the virtual representation of the vehicle in order to envisage its intended layout, exploring the usability of the dashboard, for instance (Automotive Council, 2010). It even allows testers to simulate driving the car around a virtual cityscape, allowing the team to 'optimize the ergonomics and packaging before committing to a prototype'. The next step, suggests a *Wired* article on the innovative technology, is to introduce augmented reality into these procedures, making it will be possible to embed the virtual car in a real-life environment or situation (Weaver, 2010).

## 9. CONCLUSION

In this paper, we have explored the way in which the provision of experiences as an essential component of the design and production of a fairly standard, material commodity such as the car calls into question the easy separation of the creative industries from manufacturing. Indeed, through an analysis of the car as a commodity, it is possible to see the experience of the consumption and use of the automobile as not a peripheral bonus to its practical and functional aspects, but

rather, as concepts at the forefront of features that render the car a thing of worth and value.

This is just one element of the importance of creativity in the manufacture of automobiles. The other is the actual way in which this creativity is enacted and used, via a range of high-tech, cutting-edge techniques that have more in common with the visually and graphically engaged practices of artists and creatives than do they with the oft-recognized roles of engineers and mechanics. This can tell us much not only about the creative industries today, but about the way in which capitalist economies have always operated. It also has new significance for creative practices in the analysis of the economy and its relationship with culture.

Using case studies from automotive manufacturing, we have taken the industry most often seen as the physical, material polar opposite of what are commonly imagined to be creative industries, and revealed that its practices and products exhibit the same kind of immateriality and ephemerality as those found in creative work. Indeed, the evidence of creative approaches that broaden the typical palette of tasks and approaches one might expect of manufacturing enterprises is extensive in the design of user-experience and the use of virtual reality to assist in both the 'co-production' of products by consumers and the development of car designs. Whilst showing a certain trajectory forged from the technological and informationalized affordances offered by the present time, these examples do not merely exemplify a contemporary trend, but draw our attention to a wider truth about how products are created and sold, and in those processes, ascribed value and worth.

Rather than a mere addendum to the process of 'real' production, the set of practices and functions that are today grouped together under the mantle of the 'creative industries' can actually

be seen to play *the* major rather than a minor part in the prosperity of capitalist economies. Without them products would be made, perhaps. But they would not be sold. There would be products of labor, stock inventories of unsold goods, but no commodities. There would be no market, no value, no needs, nor wants. There would no longer be the experience of consumption or the ease of use. New desires would be stillborn, and of the old ones little would be learnt or acted upon. Creative employment and specifically that embedded creative employment that provides the closest contact and proximity between creative functions and industry itself, exemplified in the case studies offered here, is no mere statistical afterthought, but may well be the engine-house of capitalist enterprise.

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